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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/901,517	07/09/2001	Shu Chuen Ho	P / 2778-15	4916

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EXAMINER

HEITBRINK, TIMOTHY W

ART UNIT PAPER NUMBER

1722

DATE MAILED: 12/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/901,517

Applicant(s)

HO ET AL.

Examiner

Tim Heitbrink

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9-29-03
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-4 and 7-11 is/are pending in the application.
- 4a) Of the above claim(s) 7-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2, 3, 10 and 11 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 2,3,10,11 are rejected under 35 U.S.C. 102(b) as being anticipated by Shimizu et al.

Shimizu et al. disclose a mold assembly for encapsulating a lead frame, the mold comprising two mold halves 25,26, one of the mold halves comprising a removable contact section 13 adapted to contact a surface of a lead frame of a 5D, 5E. The contact section 13 located in an aperture comprising a compressible material allowing for movement relative to the mold half on which it is mounted. See Fig. 9a. Looking at Fig. 9b, one can see where the contact section minimizes seepage of molding material between the mold and the frame.

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Claim 11 is rejected under 35 U.S.C. 102(b) as being anticipated by Schmid.

In Fig. 4, Schmid discloses a mold comprising two mold halves 30, 32, one of the mold halves comprising a contact section 34 located in an aperture and adapted to contact a surface of a semiconductor chip mounted in the mold and profiled to minimize seepage of molding material between the section of the mold and the surface of the chip when associated with part 64b.

Claim 11 is rejected under 35 U.S.C. 102(e) as being anticipated by Baird.

Baird discloses in Fig. 1, a mold comprising two mold halves 10, 11, one of the mold halves comprising a contact section 12, 13 located in an aperture therein and adapted to contact a surface of a semiconductor chip 14 mounted in the mold, the contact sections profiled to minimize seepage of molding material between the mold and the surface of the semiconductor chip.

Claim 11 is rejected under 35 U.S.C. 102(b) as being anticipated by Nishihara et al.

In Figs. 7 and 8 of Nishihara et al., a mold comprising two mold halves 12 and 20 is shown. One of the mold halves comprising a removable contact member 24 located in an aperture and adapted to contact a surface of a semiconductor chip mounted in the mold, the removable member mounted for movement relative to the mold half to which it is mounted via biasing means 25 to bias the member into a mold cavity defined by the mold halves. The member 24 being profiled to minimize seepage of molding material between the section of the mold and the surface of the chip as shown in Fig. 8.

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Claims 2,3,10,11 are rejected under 35 U.S.C. 102(b) as being anticipated by Tetreault et al.

Tetreault et al. disclose in Figs. 5 and 7, a mold 10 comprising two mold halves (only one of which is shown), one of the mold halves comprising a removable contact member 26, located in an aperture, which is adapted to contact a surface of a semiconductor chip 46 mounted in the mold. The contact section comprises a compressible material (rubber or silicone) which is profiled to minimize seepage of molding material between the section of the mold and the chip.

Claims 2,3,10 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Peters et al.

Peters et al. disclose in Fig. 1 a mold comprising two mold halves 2 and 3, one of the mold halves comprising a removable compression contact member 11 located in an aperture, said member adapted to contact a surface of a semiconductor chip 4 mounted in the mold. Member 11 being mounted for movement relative to the mold to bias the chip against a peripheral edge of upper mold 3 to minimize seepage of the molding material.

Claim 11 is rejected under 35 U.S.C. 102(e) as being anticipated by Steijer et al.

Steijer et al. disclose in Fig. 3 a mold comprising two mold halves 1,17, one of the mold halves comprising removable contact members 7 positioned in a corresponding aperture adapted to contact a surface of a silicon wafer 5. Members 7 are mounted for movement relative to the mold half on which it is mounted.

Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 4 defines over the prior art since the prior art fails to disclose or suggest an element operative to bias the removable member into the mold cavity.

Applicant's arguments filed 9-29-03 have been fully considered but they are not persuasive. Applicant argues the prior art fails to disclose or suggest a member positioned in an aperture. The Examiner disagrees. Each of the cited references shows a member, where each member is positioned in an aperture or space. Removing each member from the mold in which it positioned would reveal to the skilled artisan the aperture in which it sits.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tim Heitbrink whose telephone number is 703-308-3789. The examiner can normally be reached on Tuesday-Friday 5:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker can be reached on 703-308-0457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Tim Heitbrink
Primary Examiner
Art Unit 1722

12-12-03

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